BY ORDER OF THE COMMANDER
9109 AIRLIFT WING

910 AIRLIFT WING INSTRUCTION 21-109

4 FEBRUARY 2013

Maintenance

COMPOSITE TOOL KIT (CTK)
MANAGEMENT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: This publication and the references and forms cited, are available on the Air Force (AF) e-Publishing website at **http://www.e-publishing.af.mil** for downloading or ordering.

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: 910 MXS / MXMF	Certified by: 910 MXG/CC (Col Dale Andrews)
Supersedes: 910AWI21-109, 2 November 2010	Pages: 8

This instruction implements Air Force Instruction (AFI) 21-101, *Aircraft and Equipment Maintenance Management*. This instruction establishes tool management guidelines used in conjunction with AFI 21-101/Air Force Reserve Command (AFRC) Supplement, *Aerospace Equipment Maintenance Management* and the Tool Accountability System (TC Max) procedures. It applies to all personnel assigned or attached to the 910 Airlift Wing (910 AW), Youngstown Air Reserve Station (YARS), Vienna, Ohio. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force Information Management Tool (AF IMT) 847, *Recommendation for Change of Publication*; route AF 847s from the field through the appropriate functional chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and are disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at **https://www.my.af.mil/afrims/afrims/afrims/rims.cfm**.

SUMMARY OF CHANGES

This publication has been administratively revised and must be completely reviewed. Major changes include the modification of procedures.

1. Security and control.

1.1. Due to lack of facilities and manning, tools rooms are not available in all work centers; therefore, it is the Non-Commissioned Officer in Charge's (NCOIC) / supervisor's responsibility for security and control of tools and equipment.

2. Inventory requirements.

2.1. Shift inventories will be conducted at the beginning and end of shift; this will be documented in the Tool Control Accountability System (TCMax). CTK`s are not required to be opened for shift inventory, personnel will ensure all equipment is present at the beginning and end of shift. Document inventory in TCMax by creating an EID number assigned to be used for the purpose of tracking the shift inventory.

2.2. **CTK inventory requirements.**

2.2.1. All CTK inventories will be documented in TCMax utilizing the agreed upon TCMAX Master Inventory List (MIL), an example will be located on the 910 Maintenance Group (MXG) base computer share drive under the TCMAX folder. Tool storage locations do not require a TCMAX MIL but should have an inventory of content.

2.2.2. **Decentralized CTK sign out procedures**: The tool box will be signed out at the owning work center, a folder identified by the tool box EID will be taken to the box, this will contain the AFRC 175, 177 the CTK will be inventoried and member will sign the AFRC 177. Custodial responsibility begins when inventory is completed and AFRC 177 is signed. At the end of use another person will inventory the box and sign the AFRC 177, this will be returned to the CTK room enabling the tool box to be signed back in. Lost, broken, or removed tools will be annotated on the AFRC 175, *Missing/Removed Tools and Equipment*, and transcribed into TCMax. Decentralized CTK's are those which are owned by one work center and stored at another for ease of production i.e. ISO.

2.3. **Deployed CTK's** deployed from home station/cross country will be signed out long term to the deploying location from the owning work center. All deployed CTKs will add the AFRC 174, *Lost Tool/Object Report* in addition to the AFRC 175 and AFRC 177. The senior ranking maintenance person for the mission will identify a CTK custodian for the deployment. Furthermore, the CTK custodian will be responsible to load all deploying CTKs into deploying database. Ensure that all deployed CTK's are accounted for at the beginning and end of each shift. Additionally, CTK's will be signed out and back in using the AFRC Form 177 if a TCMax system is not available.

2.3.1. Aircraft without maintenance personnel, the CTK is the responsibility of the aircraft commander and will be signed out/in on the AFRC Form 177 when used by aircrew members.

3. Warranted tools.

3.1. Ensure broken or defective tools are disposed of properly and CTK EID is properly removed; usually a one-for-one swaps with the warrantor.

4. Consumable, Hazmat and Replacement tools.

4.1. Expendable hand tools such as blades, apexes, files, wire brushes, acid brushes and other shop designated items will be controlled in TCMax. Items can be loaded as replacement or special tools.

4.1.1. Replacement tools will be accounted for in TCMax as spares, they will be stored in a limited accessible area, quantities of replacement tools will be tracked in TCMax and quarterly inventories will be approved by the Flight Chief.

4.1.2. Hazardous Material (Hazmat) items that are one time use items such as oil, hydraulic cans and mixing compounds need not be tracked in TCMax. They will follow all HAZMAT and base supply procedures. Multi-use HAZMAT items which are dispatchable, will be treated like a tool, added to TCMax and will be signed out and signed in after use. The HAZMAT storage locker must have an inventory listing of all stored items with items tracked in TCMax. All HAZMAT lockers must be secured .

5. Procedures.

5.1. Tool sets are identified on the MIL by total number of items in the set (e.g., Allen wrench set - 9 each Allen wrenches + container for a total of 10). For the purpose of being able to more accurately reflect the status of items in a set, the set will be itemized on the MIL. The first line will identify the set and account for the pouch/case/container/etc. of the set. Followed by an itemized breakdown of the set as per example:

Table 1. MIL.

Nomenclature	Location	QTY
Allen wrench set- (9 Allen wrenches + container = 10 total) ****this accounts for main item****	DR1 001	1
¼ Allen wrench	DR1 001A	1
½ Allen wrench	DR1 001B	1
And so on…		1
(Note: counted as one on MIL, but each one listed)		

5.1.1. Locations of tools will be listed by drawer/section on the MIL

5.2. **Procedures for transferring of CTK at the job site** both parties will inventory the CTK together and after agreeing to its content, the individual who receives the CTK assumes custodial responsibility by signing the AFRC Form 177 which is maintained in each CTK.

5.3. Personal Protective Equipment (PPE) issued to an individual (e.g. ear defenders, headsets, safety glasses, face shields, and respirators) can be long term issued through TCMax or assigned to a shadow board. Shadow board items will be marked with as a minimum, EID designator. When issued long term to an individual, they may be maintained in personal lockers or tool rooms. As a minimum, these items will be marked with a TCMax number which can be traced back to an individual. Individuals are responsible for control of their personal protective equipment.

5.4. Rags will be controlled in TCMax they will be stored in a secure location and issued out in TCMax for positive control. See Maintenance Operations Instruction (MOI) 21-37 for Rag Control procedures.

5.5. Procedures for lost/missing tools will be in accordance with AFI21-101_AFRCSUP_I, and AWI 21-105, *Impoundment Procedures*.

5.6. CTK/Vehicle keys will be located in a designated area of the owning work center.

5.6.1. Vehicle keys will be controlled and issued through TCMax using the assigned 9-digit EID number.

5.6.2. CTK keys will be marked with the applicable CTK number and listed on the MIL with appropriate QTY. If the key is being stored separately from CTK for security then the location of the key needs to be annotated on the MIL in the comments section. (e.g. Key stored in key box when CTK is not in use for security) Some CTK's have multiple keys for separate compartments. Total number of keys is identified in the nomenclature block with the ring and id tag.

5.6.3. If the **Tool Storage Facility/Tool Room** is unable to be secured or does not meet the requirements as outlined IAW AFI21-101_AFRCSUP_I. CTK keys will be secured separately from CTK.

5.6.4. If a key box or any other means of securing keys is used, an inventory is required to account for all keys being stored for security.

5.7. Only designated CTK custodians, their alternate or a flight chief will procure tools and replacement items for the CTK.

5.8. Depot teams, factory representatives and contract field teams will be able to show full accountability of tools per the workload agreement/contract.

5.9. Locally manufactured or developed tools/equipment will be requested by the custodian or shop supervisor per 910 MOI 21-25, *Local Manufacture Operating Instruction*, and after manufactured, will be marked with the appropriate EID number and added to the MIL. Further, these tools / equipment will be inspected/ reviewed for applicability and serviceability i.e.(go/no-go gauge) during CTK's annual inspection. During biennial review of local man tool(s), if the tool/equipment is deemed applicable and configuration current, consider submitting an AFTO Form 22 for potential inclusion into technical data AF-wide.

5.10. Special Purpose CTKs are defined as "small individually issued tool kits that because of the nature of contents or type of container could preclude shadowing or silhouetting (e.g., launch kits, recovery kits, cartridge cleaning kits, oxygen servicing kits, etc)."

5.10.1. The CDDAR equipment trailer will be clearly marked with assigned EID number on the outside of trailer. Equipment contained in trailer that cannot be silhouetted / shadowed will be labeled with nomenclature and quantity at its storage location. Positive control is required in the form of physical inventories at the start and stop of a procedure or at a minimum daily when in use. All Hand-tools on the trailer fall under the CTK program guidelines and will be etched with appropriate CTK EID number. Operating Stock/materials need a master listing or other type of positive control.

5.11. In a one-person shop, the same individual may inventory non-dispatchable CTK at the beginning and end of each shift. Dispatchable CTK's will be signed out using TC Max. In the event there is no other person available to sign the tool box / tools back in using TC Max, personnel will utilize the AFRC form 177 ensuring that all information is filled in to include writing TC Max in the signed out block. The next day / shift, a different person will review the tools/ toolbox for inventory, ensure AFRC form 177 was completed and then sign tools/ toolbox back into inventory using TC Max.

5.12. **Aircrew Flight Equipment (AFE)** personnel that dispatch tool kits to the flight line will do so in accordance with AFI 11-301V1. Furthermore, all AFE CTK's are identified as T9FJX1001 thru T9FJX1018. AFE is currently not using an electronic tool accountability system. Aircrew dispatchable tool kits have not been identified. However, any additions of aforementioned kits will be coordinated through the AFE superintendents and 9109 MXG QA superintendent for inclusion in this AWI.

5.13. Mobile Work Station (MWS), Electronic Tools (E-Tools), and dispatchable accessories will be loaded and tracked in TCMax.

6. TCMAX Identifiers for Youngstown ARS.

6.1. First two characters are T9 to represent Youngstown ARS.

6.2. Third Character is as follows:

6.2.1. M - 9109 Maintenance Squadron.

6.2.2. A - 9109 Airlift Maintenance Squadron.

6.2.3. L - 9109 Maintenance Group/Maintenance Operations Flight.

6.2.4. F - 9109 Operations Group (AFE)

6.3. The fourth character is the shop designator. The following will apply:

6.3.1. **9109 Maintenance Squadron**.

6.3.1.1. G – Aero Space Ground Equipment (AGE).

6.3.1.2. A - Avionics.

6.3.1.3. D - Spray Shop.

6.3.1.4. E -Electro Environmental Shop.

6.3.1.5. F - Fuel shop.

6.3.1.6. H - Pneudraulic Shop.

6.3.1.7. I - ISO Dock.

6.3.1.8. J - Jet Shop.

6.3.1.9. M - MTEC Shop.

6.3.1.10. N - NDI Shop.

6.3.1.11. R - Aero Repair Shop.

6.3.1.12. S - Structural Repair Shop.

6.3.1.13. W - Munitions Shop.

6.3.2. **9109 Maintenance Group.**

6.3.2.1. Q - Quality Assurance.

6.3.3. **9109 Aircraft Maintenance Squadron**.

6.3.3.1. L - Flight line APG.

6.3.3.2. S - Support Equipment.

6.3.4. **9109 Operations Group**

6.3.4.1. J- Aircrew Flight Equipment (AFE)

6.4. The fifth and sixth characters may be labeled with the following characters:

6.4.1. JG - Job guides and the -6.

6.4.2. TD - Large binder Technical Orders (T.O.).

7. Additional Requirements.

7.1. An **AFRC Form 177** will be kept in each CTK for transfer of accountability at the job site in accordance with AFI 21-101.

7.2. An **AFRC Form 175** will be kept in each CTK to <u>annotate</u> all removed/missing tools and equipment and actions taken on these items in accordance with AFI21-101_AFRCSUP_I.

7.3. An **AFRC Form 174**, **Lost Tool/Object Report** (for lost tool/object) will be kept in the TCMAX Master Inventory binder and be readily accessible to all personnel.

8. Electronic Communication Devices. Personal electronic or communication devices (e.g., cell phones, beepers, pagers, portable music/video players, electronic games, etc.) are prohibited on the flight line, munitions areas, hangars, and/or other industrial work areas**. This applies to all wing agencies dispatching personnel to the previously identified areas.** This restriction does not apply to office, break, locker, ready room, and other common areas. Government/contractor equipment items issued for the performance of official duties are exempt from this requirement .Reference AFI21101_AFRCSUP_I.

REINHARD L. SCHMIDT, Colonel, USAFR
Commander, 910 Airlift Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 29 June 2006

AFMAN 33-363, *Management of Records*, 1 March 2008

910AWI 21-105, *Impoundment Procedures*, 14 August 2007

910MOI 21-25, *Local Manufacturing Operating Instruction*

Adopted Forms

AF847, *Recommendation for Change of Publications*

AFRC 175, *Missing/Removed Tools and Equipment*

AFRC 177, *Consolidated Tool Kit Inventory and Control Log*

Abbreviations and Acronyms

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFRC—Air Force Reserve Command

AFRIMS—Air Force Records Information Management System

AGE—Aero Space Ground Equipment

APG—Aircraft Power Plant General

AWI—Airlift Wing Instruction

CTK—Composite Tool Kit

EID—Equipment Identification Designator

HAZMAT—Hazardous Materiel

ISO—Isochronical Inspection Section

MIL—Master Inventory List

MOI—Maintenance Operating Instruction

MTEC—Metals Technology

NCOIC—Non-Commissioned Officer in Charge

NDI—Non Destructive Inspection

OPR—Office of Primary Responsibility

PPE—Personal Protective Equipment

RDS—Records Disposition Schedule

TCMax—Tool Accountability System

T.O.—Technical Order

YARS—Youngstown Air Reserve Station, Vienna, Ohio

Terms

Adopted Form—a form used (required) in a publication other than the prescribing publication.

(AFRC) Dispatchable CTK—CTK issued out to perform a specific task or for use by a specific AFSC and is designed to be used outside the tool room or work center.

Composite Tool Kit (CTK)—a controlled area or container used to store tools or equipment and maintain order, positive control, and ease of inventory. CTKs are assembled as a kit and designed to provide quick, easy visual inventory and accountability of all tools and equipment. CTKs may be in the form of a toolbox, a shadow board, shelves, system of drawers (Stanley Vidmar, Lista, etc.), cabinets, or other similar areas or containers. The CTK contains tools and equipment necessary to accomplish maintenance tasks, troubleshooting, and repair.

Dispatchable CTK—CTK issued out and is designed to be used outside the work center.

Form—A tool used for the collection, recording, and/or extraction of information whereby a predetermined set of data fields have been established and defined to meet a definitive purpose or object, as defined in an official Air Force publication. Official Air Force form types are defined in **Section 3B**.

Mobile Work Stations (MWS)—defined as convertible or ruggedized laptops and/or PDAs.

Prescribed Form—a form designed to support the implementation of requirements in a directive Air Force publication. Use and purpose of a prescribed form must be contained in the publication it supports (also known as the prescribing publication).

Special Purpose CTK—Small individually issued tool kits that because of the nature of contents or type of container could preclude shadowing or silhouetting (e.g., launch kits, recovery kits, cartridge cleaning kits, oxygen servicing kits, etc).

Shop CTK—Tool kits (not dispatched) used by work center personnel during a shift, provided a single person is responsible for the tool kit.

Tool Storage Facility/Tool Room—a controlled area within a work center designated for storage and issue of tools and equipment.